IN THE CLAIMS:

Claims 10, 75-178, 187, and 188 were previously cancelled. Claims 11, 15, 16, 18, 19, 23, 35, 37, 46, 52, 54, 57, 58, and 61 have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

1. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile, at least a portion of the inner profile having a geometry configured to substantially match a geometry of at least a portion of a drilling profile of a leading face of another drilling tool for subsequently drilling through a portion of the casing bit;

an outer profile;

a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

a plurality of generally radially extending blades disposed on the nose portion, at least one of the plurality of blades carrying one or more cutting elements affixed thereto; and

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion.

2. (Original) The casing bit of claim 1, wherein the casing bit comprises steel.

3. (Original) The casing bit of claim 1, wherein at least a portion of the outer profile of the casing bit exhibits an inverted cone geometry.

4. (Original) The casing bit of claim 1, wherein at least one of the one or more cutting elements are selected from the group consisting of a polycrystalline diamond cutting element, a thermally stable diamond cutting element, a natural diamond cutting element, and a tungsten carbide cutting element.

5. (Previously presented) The casing bit of claim 1, wherein:

the one or more cutting elements comprise a first plurality of cutting elements and a second plurality of cutting elements;

the first plurality of cutting elements is configured to initially engage and drill through a selected region; and

the second plurality of cutting elements is configured to engage and drill through a region to be subsequently encountered by the casing bit, at least one cutting element of the second plurality of cutting elements comprising a polycrystalline diamond cutting element and positioned in rotational alignment with at least one cutting element of the first plurality of cutting elements comprising a tungsten carbide cutting element.

6. (Original) The casing bit of claim 5, wherein each of the first plurality of cutting elements comprise a tungsten carbide cutting element and each of the second plurality of cutting elements comprise a polycrystalline diamond cutting element.

7. (Original) The casing bit of claim 6, wherein the first plurality of cutting elements exhibits greater exposure than the second plurality of cutting elements.

8. (Previously presented) The casing bit of claim 1, further comprising an integral stem section extending longitudinally from the nose portion.

9. (Original) The casing bit of claim 8, wherein the integral stem section comprises at least one of a frangible region, a float valve mechanism, a cementing stage tool, a float collar mechanism, or a landing collar structure.

10. (Cancelled)

11. (Currently amended) The casing bit of claim 1, wherein at least a portion of the outer profile of the casing bit has a geometry substantially matching the geometry of the drilling profile of the leading face of the another drilling tool.

12. (Original) The casing bit of claim 1, wherein at least a portion of the casing bit is configured to fail in response to pressure acting on an interior surface thereof.

13. (Original) The casing bit of claim 12, wherein the at least a portion of the casing bit configured to fail is sized and configured to transmit cement therethrough.

14. (Previously presented) The casing bit of claim 1, wherein the average distance between the inner profile and the outer profile of the casing bit is selected in relation to a maximum predicted stress, the maximum predicted stress predicted in relation to expected forces of operating the casing bit to drill the casing section into the subterranean formation.

15. (Currently amended) The casing bit of claim 14, wherein the casing bit comprises a material having a yield stress that is at least one and ~~one half~~ one-half times the maximum predicted stress.

16. (Currently amended) The casing bit of claim 1, wherein the one or more cutting elements comprise a plurality of cutting elements;

wherein a first portion of the plurality of cutting elements is disposed generally within ~~the at~~ at least a portion of the casing bit that is configured to be drilled through;

wherein a second portion of the plurality of cutting elements is disposed generally peripheral to the at least a portion of the casing bit that is configured to be drilled through; and

wherein a majority of cutting elements of the first portion is configured differently than a majority of cutting elements of the second portion.

17. (Original) The casing bit of claim 16, wherein a size of the majority of the first portion of the plurality of cutting elements is smaller than a size of the majority of cutting elements of the second portion.

18. (Currently amended) The casing bit of claim 16,
wherein each of the plurality of cutting elements contains an amount of abrasive material; and
wherein an average amount of the abrasive material contained by each of the plurality of cutting elements of the first portion is less than an average amount of the abrasive material contained by each of the plurality of cutting elements of the second portion.

19. (Currently amended) The casing bit of claim 16, wherein a majority of the first portion of the plurality of cutting elements is substantially carbide-free.

20. (Original) The casing bit of claim 16, wherein each of the plurality of cutting elements comprises a polycrystalline diamond cutting element.

21. (Original) The casing bit of claim 16, wherein at least one of the plurality of cutting elements generally within the at least a portion of the casing bit that is configured to be drilled through comprises a first grade of cutting element relating to at least one inherent quality related to wear characteristics, and at least one of the plurality of cutting elements generally peripheral to the at least a portion of the casing bit that is configured to be drilled through comprises a second grade of cutting element relating to at least one inherent quality related to wear characteristics, wherein the at least one inherent quality of the second grade of cutting element is generally different than the at least one inherent quality of the first grade of cutting element.

22. (Original) The casing bit of claim 21, wherein the at least one inherent quality related to wear characteristics of the first grade of cutting element is generally inferior to the at least one inherent quality related to wear characteristics of the second grade of cutting element.

23. (Currently amended) The casing bit of claim 16, wherein a majority of the first portion of the plurality of cutting elements comprises an abrasive selected from the group consisting of carbide, natural diamond, and synthetic diamond, wherein an amount of the abrasive on each cutting element of the majority of the first portion of the plurality of cutting elements is selectively tailored to substantially wear away in response to drilling through a selected formation region.

24. (Original) The casing bit of claim 1, further comprising one or more wear knots disposed on at least one of the plurality of blades.

25. (Original) The casing bit of claim 24, wherein the one or more wear knots are sized and configured to minimize at least one of torque fluctuations while drilling and rate-of-penetration fluctuations while drilling.

26. (Previously presented) The casing bit of claim 1, wherein at least one cutting element of the one or more cutting elements exhibits a limited amount of cutter exposure perpendicular to a face of the blade to which the at least one cutting element is affixed, and wherein a total bearing area of the casing bit is configured to limit a maximum depth-of-cut of the at least one cutting element into the formation during drilling.

27. (Original) The casing bit of claim 1, wherein at least a portion of the casing bit comprises an abrasive dispersed within a metal binder.

28. (Original) The casing bit of claim 27, wherein the abrasive comprises at least one of carbide, natural diamond, and synthetic diamond.

29. (Original) The casing bit of claim 1, further comprising a coating disposed on at least a portion of the exterior of the casing bit.

30. (Original) The casing bit of claim 29, wherein the coating is formulated to inhibit adhesion between formation cuttings and the casing bit.

31. (Original) The casing bit of claim 30, wherein the coating comprises a polymer.

32. (Original) The casing bit of claim 29, wherein the coating is formulated to inhibit at least one of erosion, abrasion, and wear to the casing bit.

33. (Original) The casing bit of claim 32, wherein the coating comprises diamond.

34. (Original) The casing bit of claim 1, wherein each of the plurality of blades extends generally radially outwardly in a generally spiral fashion from a central axis of the casing bit to the radial outer extent thereof.

35. (Currently amended) The casing bit of claim 1, wherein each of the at least one gage ~~sections~~ section of each blade ~~extend~~ extends longitudinally from the nose portion in a generally helical fashion.

36. (Previously presented) The casing bit of claim 1, further comprising at least one rotationally trailing groove formed in at least one of the plurality of blades rotationally directly behind at least one cutting element affixed thereto.

37. (Currently amended) The casing bit of claim 36, wherein the at least one rotationally trailing groove follows at least one of a tangential path and a circumferential path relative ~~to the~~ to a direction of rotation of the casing bit.

38. (Original) The casing bit of claim 36, wherein the at least one rotationally trailing groove exhibits at least one of a substantially constant width along a direction of rotation of the casing bit and a tapered geometry in which the width of the at least one rotationally trailing groove increases along a direction of rotation of the casing bit.

39. (Original) The casing bit of claim 1, wherein the at least one aperture comprises a retention structure.

40. (Original) The casing bit of claim 39, further comprising at least one of a nozzle and a sleeve disposed within and affixed to the retention structure.

41. (Original) The casing bit of claim 40, wherein at least a portion of the at least one of a nozzle and a sleeve is configured to be removed in relation to an expected amount of erosion.

42. (Original) The casing bit of claim 40, wherein the at least one of a nozzle and a sleeve is affixed to the retention structure via at least one of welding, brazing, and engagement of threaded surfaces.

43. (Original) The casing bit of claim 40, wherein the at least one of the nozzle and the sleeve comprise one or more of tungsten carbide, ceramic, steel, aluminum, bronze, and brass.

44. (Original) The casing bit of claim 40, wherein the at least one of a nozzle and a sleeve is replaceable.

45. (Previously presented) The casing bit of claim 1, further comprising at least one rolling cone affixed to the nose portion.

46. (Currently amended) The casing bit of claim 1, wherein the one or more cutting elements comprise a plurality of cutting elements;

wherein a first portion of the plurality of cutting elements is disposed generally within the at least a portion of the casing bit that is configured to be drilled through;

wherein a second portion of the plurality of cutting elements is disposed generally peripheral to the at least a portion of the casing bit that is configured to be drilled through; and

wherein at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one blade of the casing bit differently than at least a majority of the second portion of the plurality of cutting elements.

47. (Original) The casing bit of claim 46, wherein the at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one blade of the casing bit by an adhesive.

48. (Original) The casing bit of claim 46, wherein the at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one blade of the casing bit by a solder.

49. (Original) The casing bit of claim 1, wherein the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by an adhesive.

50. (Original) The casing bit of claim 1, wherein the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by a solder.

51. (Original) The casing bit of claim 46, wherein the at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one of the plurality of blades of the casing bit by electrically disbonding material.

52. (Currently amended) The casing bit of claim 51, further comprising:
a conductor extending to and in electrical communication with each of the at least a majority of the first portion of the plurality of cutting elements affixed to the at least one of the plurality of blades of the casing bit by electrically disbonding material; and
wherein each conductor is electrically insulated from the casing bit.

53. (Original) The casing bit of claim 1, wherein the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by electrically disbonding material.

54. (Currently amended) The casing bit of claim 53, further comprising:
a conductor extending to and in electrical communication with the one or more cutting elements affixed to the at least one of the plurality of blades of the casing bit by the electrically disbonding material;
wherein the conductor is electrically insulated from the casing bit.

55. (Original) The casing bit of claim 46, wherein the at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one of the plurality of blades of the casing bit by a fastening element extending therethrough.

56. (Original) The casing bit of claim 1, wherein the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by a fastening element extending therethrough.

57. (Currently amended) The casing bit of claim 46, wherein each of the at least a majority of the first portion of the plurality of cutting elements comprises an elongated body having an upper end comprising a cutting element and a lower end configured to extend through a recess formed in the at least one of the plurality of blades of the casing bit, the elongated body being affixed to the at least one of the plurality of blades of the casing bit by way of the lower end thereof.

58. (Currently amended) The casing bit of claim 57, wherein the lower ends of the elongated bodies of the at least a majority of the first portion of cutting elements are affixed to the at least one of the plurality of blades of the casing bit by at least one of a threaded element, a weld, a braze joint, and a pin.

59. (Original) The casing bit of claim 1, wherein the one or more cutting elements comprises an elongated body having an upper end comprising a cutting element and a lower end configured to extend through a recess formed in the at least one of the plurality of blades of the casing bit, the elongated body of the one or more cutting elements being affixed to the at least one of the plurality of blades of the casing bit by way of the lower end thereof.

60. (Original) The casing bit of claim 59, wherein the lower end of the elongated body of the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by at least one of a threaded element, a weld, a braze joint, and a pin.

61. (Currently amended) The casing bit of claim 46, wherein the at least a majority of the first portion of the plurality of cutting elements is affixed to the at least one of the plurality of blades of the casing bit by a braze material exhibiting a liquidus temperature of, at most, about 1305° Fahrenheit.

62. (Original) The casing bit of claim 1, wherein the one or more cutting elements is affixed to the at least one of the plurality of blades of the casing bit by a braze material exhibiting a liquidus temperature of, at most, about 1305° Fahrenheit.

63. (Previously presented) The casing bit of claim 1, further comprising at least one groove that is sized and configured to preferentially facilitate separation of at least a portion of the casing bit into sections as the at least a portion of the casing bit is drilled through by the another drilling tool.

64. (Previously presented) The casing bit of claim 63, wherein the at least one groove comprises a plurality of grooves sized and configured to preferentially facilitate separation of at least a portion of the casing bit into sections as the at least a portion of the casing bit is drilled through by the another drilling tool.

65. (Previously presented) The casing bit of claim 1, wherein the nose portion comprises one or more fibers disposed within a matrix material.

66. (Original) The casing bit of claim 65, wherein the one or more fibers is circumferentially oriented.

67. (Original) The casing bit of claim 65, wherein the one or more fibers is oriented concentrically or spirally.

68. (Original) The casing bit of claim 1, further comprising at least one sensor for measuring a condition of drilling, a condition of the casing bit, or a formation characteristic.

69. (Previously presented) The casing bit of claim 1, wherein the casing bit comprises an outer shell and at least one inner core, the outer shell extending over substantially the entire nose portion.

70. (Original) The casing bit of claim 69, wherein the outer shell comprises at least one of steel, iron alloys, tungsten carbide powder infiltrated with a copper based binder, and nickel alloys and the at least one inner core comprises at least one of aluminum, brass, bronze, or phenolic.

71. (Original) The casing bit of claim 69, wherein the outer shell and the at least one inner core are affixed to one another by at least one of fasteners, welding, and brazing.

72. (Original) The casing bit of claim 1, wherein at least a portion of a leading face of a blade of the plurality of blades of the casing bit is formed from a superabrasive material.

73. (Previously presented) The casing bit of claim 1, further comprising:
at least one of an incendiary agent, an explosive agent, and a reactive chemical;
wherein the at least one of an incendiary agent, an explosive agent, and a reactive chemical is configured to render the casing bit more drillable.

74. (Original) The casing bit of claim 1, further comprising an integral stem section including at least one of a float valve mechanism, a frangible region, a cementing stage tool, a float collar mechanism, and a landing collar structure.

75.-178. (Cancelled)

179. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile, at least a portion of the inner profile having a geometry configured to substantially match a geometry of at least a portion of a drilling profile of a leading face of another drilling tool for subsequently drilling through a portion of the casing bit;

an outer profile;

a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

a plurality of discrete cutting element retention structures extending from the nose portion, each discrete cutting element retention structure being configured to carry a sole cutting element; and

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion.

180. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile;

an outer profile;

a nose portion;

at least one thread for securing the casing bit to a separate casing section of a casing string;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

a plurality of cutting elements affixed to the nose portion, the plurality of cutting elements configured for causing failure in the formation by contact therewith; and

at least one gage section configured to define an outermost radius of the casing bit, the at least one gage section extending longitudinally from adjacent the nose portion, the at least one gage section configured to extend longitudinally adjacent at least a portion of the separate casing section of the casing string when the separate casing section is secured to the casing bit.

181. (Previously presented) The casing bit of claim 180, further comprising an integral stem section extending longitudinally from the nose portion.

182. (Original) The casing bit of claim 181, wherein the integral stem section comprises at least one of a frangible region, a float valve mechanism, a cementing stage tool, a float collar mechanism, or a landing collar structure.

183. (Original) The casing bit of claim 180, wherein the outer profile comprises a substantially symmetrical profile, with respect to a longitudinal axis of the casing bit.

184. (Original) The casing bit of claim 180, wherein the plurality of cutting elements comprises polycrystalline diamond stud-type cutting elements.

185. (Original) The casing bit of claim 180, wherein the plurality of cutting elements comprises percussion inserts.

186. (Original) The casing bit of claim 185, wherein the percussion inserts comprise at least one of cemented tungsten carbide and diamond.

187. (Cancelled)

188. (Cancelled)

189. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile;

an outer profile;

a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion;

a plurality of generally radially extending blades disposed on the nose portion, at least one of the plurality of blades carrying a plurality of cutting elements affixed thereto, the plurality of cutting elements comprising:

a first plurality of cutting elements configured to initially engage and drill through a first region and to substantially wear away while drilling through the first region; and

a second plurality of cutting elements configured to engage and drill through a second region to be subsequently encountered by the casing bit, at least one cutting element of the second plurality of cutting elements comprising a polycrystalline diamond cutting element and positioned in rotational alignment with at least one cutting element of the first plurality of cutting elements comprising a tungsten carbide cutting element, the at least one cutting element of the second plurality of cutting elements positioned to rotationally follow the at least one cutting element of the first plurality of cutting elements in a groove formed by the at least one cutting element of the first plurality of cutting elements when the casing bit is rotated during a drilling operation.

190. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile;

an outer profile;

a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion; and

a plurality of generally radially extending blades disposed on the nose portion, at least one of the plurality of blades carrying one or more cutting elements affixed thereto, at least one of the one or more cutting elements being affixed to the at least one of the plurality of blades by electrically disbonding material.

191. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile;

an outer profile;

a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion; and

a plurality of generally radially extending blades disposed on the nose portion, at least one blade of the plurality of blades carrying one or more cutting elements affixed thereto; and

at least one groove formed in the at least one blade of the plurality of blades, the at least one groove configured to cause the at least one blade to separate into two or more smaller sections when another drilling tool is used to drill through the casing bit, the at least one groove comprising an end surface extending longitudinally into the at least one blade at a location rotationally behind the one or more cutting elements to a floor, the at least one groove extending through the at least one blade to a rotationally trailing longitudinally extending surface of the at least one blade.

192. (Previously presented) A casing bit for drilling a casing section into a subterranean formation, comprising:

an inner profile;

an outer profile;

a nose portion, at least a portion of the nose portion comprising one or more fibers disposed within a matrix material;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion; and

a plurality of generally radially extending blades disposed on the nose portion, at least one of the plurality of blades carrying one or more cutting elements affixed thereto.

193. (Previously presented) A drilling assembly for drilling a casing section into a subterranean formation, comprising:

a casing section of a casing string;

a casing bit secured to an end of the casing section, the casing bit having an inner profile, an outer profile, and a nose portion;

at least one aperture formed in the nose portion and configured for delivering drilling fluid from an interior of the casing bit to an exterior thereof;

at least one gage section, the at least one gage section extending longitudinally from adjacent the nose portion;

a plurality of generally radially extending blades disposed on the nose portion, at least one of the plurality of blades carrying one or more cutting elements affixed thereto; and

at least one of an incendiary agent, an explosive agent, and a reactive chemical in a container affixed to at least one of the casing section and the casing bit, the at least one of an incendiary agent, an explosive agent, and a reactive chemical being configured to render the casing bit more drillable.